AUTHOR INDEX TO VOLUME 76

Adams, C.S., G.T. Maker and A.I. Ferguson, FM operation of Nd:YAG lasers with standing wave and ring cavity configurations 76 (1990) 127
Agulló-López, F., see F. Jariego 76 (1990) 169
Anderson, D.Z., see D.M. Lininger 76 (1990) 89
André, J.-M., see H. Berrouane 76 (1990) 111
Angel, G., see R. Gagel 76 (1990) 239
Avramopoulos, H., P.M.W. French, G.H.C. New, M.M. Opalinska, J.R. Taylor and J.A.R. Williams, Temporal and spectral behaviour of passively mode locked dye lasers 76 (1990) 229

Barchewitz, R., see H. Berrouane 76 (1990) 111
Bermejo, F.J., see P. García-Fernández 76 (1990) 173
Berrouane, H., J.-M. André, R. Barchewitz, C. Khan Malek and R. Rivoira, Soft-X-ray multilayer gratings with subhalfmicron period 76 (1990) 111
Bian, S., K. Xu and J. Hong, Near neighboring neurons interconnected neural network 76 (1990) 199
Bloisi, F., L. Vicari and F. Simoni, Remarks on the temperature dependence of the Optical Friedericksz Transition 76 (1990) 261
Boden, C., F. Mitschke and P. Mandel, Nonlinear control: bistability with modulated input 76 (1990) 178
Bonifacio, R., C. Maroli and A. Dragan, A Landau-Ginzburg equation for a high-gain free electron laser 76 (1990) 353
Bose, N.K., see D.W. Richardson 76 (1990) 8
Botter, R., see E. le Guyadec 76 (1990) 34
Brodin, M.S., V.I. Volkov, N.V. Kukhtarev and A.V. Privalko, Nanosecond electrogyration selfdiffraction in $Bi_{12}TiO_{20}$ (BTO) crystal 76 (1990) 21
Brueck, S.R.J., see A. Mukherjee 76 (1990) 220
Brumback, B.A., see J. Jahns 76 (1990) 318
Buzek, V., see T. Quang 76 (1990) 47

Cavalcanti, G.H., see R.A.D. Zanon 76 (1990) 350
Chavel, P., see Ph. Lalanne 76 (1990) 387
Chébira, A. and J. Chesnoy, Amplification of a femtosecond laser at eight kilohertz with a continuously pumped YAG laser 76 (1990) 235
Chen, W.-Z., see Z.-Q. Wang 76 (1990) 305
Cheng, I.S., see H.R. Xia 76 (1990) 345
Chern, J.-L., J.K. McIver and J.-T. Shy, Effect of delay in a bistable optical system with distributed nonlinear elements 76 (1990) 63
Chern, J.-L., see K. Otsuka 76 (1990) 245
Chesnoy, J., see A. Chébira 76 (1990) 235
Chrostowski, J., see M.S. Wartak 76 (1990) 217
Chyba, T.H., Deterministic solution to the inhomogeneously broadened bidirectional ring laser equations with backscattering, asymmetry, and cavity rotation 76 (1990) 395
Cooper, J., see S.Ya. Kilin 76 (1990) 157

0030-4018/90/$03.50 © Elsevier Science Publishers B.V. (North-Holland)

Cronin-Golomb, M., see K.D. Shaw 76 (1990) 151
Crouch, D.D., see D.M. Lininger 76 (1990) 89

D'Amato, F., M. Giorgi and S. Marchetti, High tunability, high beam quality CO_2 laser with SFUR cavity and beam expander 76 (1990) 121
Das, T.K. and K. Singh, Angle dependence of the PCR in the simultaneous operation of reflection and transmission gratings in photorefractives 76 (1990) 381
De Martini, F. and K.H. Strobl, Photocount quantum fluctuations in beam-splitting difference detection 76 (1990) 75
Devos, F., see Ph. Lalanne 76 (1990) 387
Dragan, A., see R. Bonifacio 76 (1990) 353
Driemeier, W., Prepolymer-based waveguiding thin films for the holographic recording of dry-developing refractive-index gratings 76 (1990) 25

Eberly, J.H., see M.S.K. Razmi 76 (1990) 265
Eichmann, G., see Y. Li 76 (1990) 107

Ferguson, A.I., see C.S. Adams 76 (1990) 127
Ferguson, A.I., see G.T. Maker 76 (1990) 369
Ferrier, J.L., see H.W. Li 76 (1990) 13
Foxon, C.T., see W.A.J.A. van der Poel 76 (1990) 116
French, P.M.W., see H. Avramopoulos 76 (1990) 229
Fukuda, Y., see K. Ishikawa 76 (1990) 81

Gagel, R., G. Angel and A. Laubereau, Efficient amplification and tunable frequency conversion of femtosecond pulses 76 (1990) 239
Gagen, M.J. and G.J. Milburn, Correlated photons in parametric frequency conversion with initial two-mode squeezed states 76 (1990) 253
Galatola, P., see L.A. Lugiato 76 (1990) 276
Gale, G.M., B. Pedersen and P. Schanne, Kilohertz picosecond distributed-feedback dye laser system 76 (1990) 138
García-Fernández, P. and F.J. Bermejo, Nonlinear dispersion effects in the low-noise properties of squeezed light in transmission chains formed from nonlinear alternating attenuators and amplifiers 76 (1990) 173
Garda, P., see Ph. Lalanne 76 (1990) 387
Gassen, J., D. Müller, P. von Brentano and A.P. Georgiadis, A high power dye laser pumped by a crowbar mode flashlamp 76 (1990) 131
Gazengel, J., see H.W. Li 76 (1990) 13
Georgiadis, A.P., see J. Gassen 76 (1990) 131
Ginzburg, N.S., M.A. Gorshkova and A.S. Sergeev, Efficiency enhancement in free-electron lasers under conditions of optical guiding 76 (1990) 69
Giorgi, M., see F. D'Amato 76 (1990) 121
Gorshkova, M.A., see N.S. Ginzburg 76 (1990) 69

Haas, R.A., see M.D. Rotter 76 (1990) 56
Hashi, T., see K. Ishikawa 76 (1990) 81
Heißmeier, M., U. Krackhardt and N. Streibl, A Dammann grating with diffraction orders of arbitrary intensity etched into Al_2O_3

76 (1990) 103
Honda, T., see J. Huang 76 (1990) 297
Hong, J., see S. Bian 76 (1990) 199
Huang, J., T. Honda and N. Ohyama, A phase stepping double-focus interferometer using a cyclic design and polarized light 76 (1990) 297
Huang, Y.K., see R.A.D. Zanon 76 (1990) 350

Ishikawa, K., Y. Takahashi, U. Tanaka, Y. Fukuda and T. Hashi, Enhanced coherent phonon generation by periodic excitation with Q-switched and mode-locked laser pulses 76 (1990) 81

Jahns, J. and S.J. Walker, Imaging with planar optical systems 76 (1990) 313
Jahns, J. and B.A. Brumback, Integrated-optical split-and-shift module based on planar optics 76 (1990) 318
Jahns, J., Optical implementation of the Banyan network 76 (1990) 321
Janszky, J., T. Kobayashi and A.V. Vinogradov, Phonon squeezing in chirped pulse pump and probe experiments 76 (1990) 30
Jared, D.A., K.M. Johnson and G. Moddel, Joint transform correlator using an amorphous silicon ferroelectric liquid crystal spatial light modulator 76 (1990) 97
Jariego, F. and F. Agulló-López, Monotonic versus oscillatory behaviour during holographic writing in photorefractive photovoltaic materials 76 (1990) 169
Javidi, B., J. Ruiz and C. Ruiz, Image enhancement by nonlinear joint transform processing 76 (1990) 325
Jiang, W., see M.S. Wartak 76 (1990) 217
Johnson, K.M., see D.A. Jared 76 (1990) 97
Jones, J.D.C. and P. Urquhart, An injection-locked erbium fibre laser 76 (1990) 42

Kaga, S., see M. Yamashita 76 (1990) 363
Kaino, T., see S. Matsumoto 76 (1990) 147
Khan Malek, C., see H. Berrouane 76 (1990) 111
Kilin, S.Ya., M. Trippenbach and J. Cooper, Population correlations in transient stimulated Raman scattering 76 (1990) 157
Kobayashi, T., see J. Janszky 76 (1990) 30
Krackhardt, U., see M. Heißmeier 76 (1990) 103
Kubodera, K., see S. Matsumoto 76 (1990) 147
Kukhtarev, N.V., see M.S. Brodin 76 (1990) 21
Kumar, P., see R. Nath 76 (1990) 51
Kumar, P., see M.E. Marhic 76 (1990) 143
Kurihara, T., see S. Matsumoto 76 (1990) 147

Lagendijk, A., see E.A.J. Spaans 76 (1990) 376
Lalanne, Ph., H. Richard, J.C. Rodier, P. Chavel, J. Taboury, K. Madani, P. Garda and F. Devos, 2-D generation of random numbers by multimode fiber speckle for silicon arrays of processing elements 76 (1990) 387
Lambert, F., see E. le Guyadec 76 (1990) 34
Lan, L.H., see T. Quang 76 (1990) 47
Lanen, T.A.W.M., C. Nebbeling and J.L. van Ingen, Phase-stepping holographic interferometry in studying transparent density fields around 2-D objects of arbitrary shape 76 (1990) 268
Laubereau, A., see R. Gagel 76 (1990) 239
Le Guyadec, E., J. Ravoire, R. Botter, F. Lambert and A. Petit, Effect of a magnetic field

on the resonant multistep selective photoionization of gadolinium isotopes 76 (1990) 34
Li, H.W., J.L. Ferrier, J. Gazengel, N.P. Xuan, J.J. Zhang and G. Rivoire, Image processing: Fourier spectrum nonlinear filtering by photorefractive Fe:$LiNbO_3$ crystals 76 (1990) 13
Li, Y. and G. Eichmann, Nonabsorptive binary optical programmable logic array 76 (1990) 107
Lininger, D.M., D.D. Crouch, P.J. Martin and D.Z. Anderson, Theory of bistability and self pulsing in a ring resonator with saturable photorefractive gain and loss 76 (1990) 89
Liu, L., see L. Zhang 76 (1990) 194
Lue, R.-Y., see Z.-Q. Wang 76 (1990) 305
Lugiato, L.A., P. Galatola and L.M. Narducci, Universal normal-form description of squeezing and instabilities in two-photon processes 76 (1990) 276

Ma, L.S., see H.R. Xia 76 (1990) 345
Madani, K., see Ph. Lalanne 76 (1990) 387
Maker, G.T., see C.S. Adams 76 (1990) 127
Maker, G.T. and A.I. Ferguson, Efficient frequency doubling of a diode-laser-pumped mode-locked Nd:YAG laser using an external resonant cavity 76 (1990) 369
Mandel, P., see C. Boden 76 (1990) 178
Mao, Y.-J., see C.-X. Shi 76 (1990) 345
Marchetti, S., see F. D'Amato 76 (1990) 121
Marhic, M.E. and P. Kumar, Squeezed states with a thermal photon distribution 76 (1990) 143
Maroli, C., see R. Bonifacio 76 (1990) 353
Martin, P.J., see D.M. Lininger 76 (1990) 89
Massone, C.A., see R.A.D. Zanon 76 (1990) 350
Matsumoto, S., K. Kubodera, T. Kurihara and T. Kaino, Third-order nonlinear optical properties of cyanine dyes and polymer films containing these dyes 76 (1990) 147
Mayer, G., Arithmetical measurements of electrical intensities with electro-optical devices 76 (1990) 203
Mazzacurati, V. and G. Ruocco, The super-gratings: how to improve the limiting resolution of grating spectrometers 76 (1990) 185
McIver, J.K., see J.-L. Chern 76 (1990) 63
McIver, J.K., see K. Otsuka 76 (1990) 245
Milburn, G.J., see M.J. Gagen 76 (1990) 253
Min, L.H. and K. Vogler, Misalignment sensitivity of Nd:YAG unstable resonator with self-filtering aperture 76 (1990) 357
Minemoto, T., see K. Nakagawa 76 (1990) 206
Mitschke, F., see C. Boden 76 (1990) 178
Moddel, G., see D.A. Jared 76 (1990) 97
Mukherjee, A., S.R.J. Brueck and A.Y. Wu, Electric field induced second harmonic generation in PLZT 76 (1990) 220
Mukhopadhyay, S., An optical conversion system: from binay to decimal and decimal to binary 76 (1990) 309
Müller, D., see J. Gassen 76 (1990) 131
Murti, Y.V.G.S., see R. Vijaya 76 (1990) 256

Nakagawa, K., T. Takatsuji and T. Minemoto, Measurement of the displacement distribution by speckle photography using a BSO crystal 76 (1990) 206
Narducci, L.M., see L.A. Lugiato 76 (1990) 276
Nath, R. and P. Kumar, Higher-order coherence functions of phase states 76 (1990) 51

Nebbeling, C., see T.A.W.M. Lanen 76 (1990) 268
New, G.H.C., see H. Avramopoulos 76 (1990) 229

Ohyama, N., see J. Huang 76 (1990) 297
Ong, H.L., An alternative derivation of the 4×4 propagation matrix formalism 76 (1990) 302
Opalinska, M.M., see H. Avramopoulos 76 (1990) 229
Otsuka, K., J.-L. Chern and J.K. McIver, High speed self-pulsation in a two-element optical bistable device 76 (1990) 245

Pedersen, B., see G.M. Gale 76 (1990) 138
Petit, A., see E. le Guyadec 76 (1990) 34
Petrov, V. and W. Rudolph, Femtosecond solitary waves in the presence of resonant absorption 76 (1990) 53
Prasada Rao, T.A., see R. Vijaya 76 (1990) 256
Privalko, A.V., see M.S. Brodin 76 (1990) 21

Quang, T., L.H. Lan, A.S. Shumovsky and V. Buzek, Amplitude-squared squeezing in collective resonance fluorescence 76 (1990) 47

Ravoire, J., see E. le Guyadec 76 (1990) 34
Razmi, M.S.K. and J.H. Eberly, Degenerate four-wave mixing and squeezing in pumped three-level atomic systems 76 (1990) 265
Rebane, I., Theory of two-step pulsed spectral hole-burning in four-level systems 76 (1990) 225
Richard, H., see Ph. Lalanne 76 (1990) 387
Richardson, D.W. and N.K. Bose, Necessary conditions for nonnegativity constrained spectral factorization 76 (1990) 8
Ridley, K.D. and A.M. Scott, Self-pumped Brillouin enhanced four-wave mixing in a medium with a small phase mismatch 76 (1990) 406
Rivoira, R., see H. Berrouane 76 (1990) 111
Rivoire, G., see H.W. Li 76 (1990) 13
Rodier, J.C., see Ph. Lalanne 76 (1990) 387
Rotter, M.D. and R.A. Haas, Spectral characteristics of steady-state amplifiers 76 (1990) 56
Rudolph, W., see V. Petrov 76 (1990) 53
Ruiz, C., see B. Javidi 76 (1990) 325
Ruiz, J., see B. Javidi 76 (1990) 325
Ruocco, G., see V. Mazzacurati 76 (1990) 185

Samanta, L.K., T. Yanagawa and Y. Yamamoto, Technique for enhanced second harmonic output power 76 (1990) 250
Sammut, R.A. and I.M. Skinner, Effective index models for MQW waveguides 76 (1990) 213
Schanne, P., see G.M. Gale 76 (1990) 138
Scott, A.M., see K.D. Ridley 76 (1990) 406
Sergeev, A.S., see N.S. Ginzburg 76 (1990) 69
Severens, A.L.G.J., see W.A.J.A. van der Poel 76 (1990) 116
Shaw, K.D. and M. Cronin-Golomb, Stability of multiple solutions in photorefractive four-wave mixing with external electric field 76 (1990) 151
Shi, C.-X. and Y.-J. Mao, Polarization coupling in single-mode single-polarization optical fibers: power coupling

76 (1990) 345
Shumovsky, A.S., see T. Quang 76 (1990) 47
Shy, J.-T., see J.-L. Chern 76 (1990) 63
Sibbett, W., see X. Zhu 76 (1990) 340
Simoni, F., see F. Bloisi 76 (1990) 261
Singh, K., see T.K. Das 76 (1990) 381
Skinner, I.M., see R.A. Sammut 76 (1990) 213
Spaans, E.A.J., M.P. van Exter and A. Lagendijk, Measurements of rotational diffusion with time-resolved stimulated anisotropic Raman scattering 76 (1990) 376
Streibl, N., see M. Heißmeier 76 (1990) 103
Strobl, K.H., see F. De Martini 76 (1990) 75
Sundarrajan, G., see R. Vijaya 76 (1990) 256
Syrett, B.A., see M.S. Wartak 76 (1990) 217

Taboury, J., see Ph. Lalanne 76 (1990) 387
Tai, R.-Z., see Z.-Q. Wang 76 (1990) 305
Takahashi, Y., see K. Ishikawa 76 (1990) 81
Takatsuji, T., see K. Nakagawa 76 (1990) 206
Tanaka, U., see K. Ishikawa 76 (1990) 81
Taylor, J.R., see H. Avramopoulos 76 (1990) 229
Torizuka, K., see M. Yamashita 76 (1990) 363
Trippenbach, M., see S.Ya. Kilin 76 (1990) 157
Tsui, K.H., see R.A.D. Zanon 76 (1990) 350

Urquhart, P., see J.D.C. Jones 76 (1990) 42

Van der Poel, W.A.J.A., A.L.G.J. Severens and C.T. Foxon, Quantum beats in the exciton emission of type II GaAs/AlAs quantum wells 76 (1990) 116
Van Exter, M.P., see E.A.J. Spaans 76 (1990) 376
Van Ingen, J.L., see T.A.W.M. Lanen 76 (1990) 268
Vicari, L., see F. Bloisi 76 (1990) 261
Vijaya, R., Y.V.G.S. Murti, G. Sundarrajan and T.A. Prasada Rao, Degenerate four-wave mixing in solutions of pure and iodine-doped polyphenylacetylene 76 (1990) 256
Vinogradov, A.V., see J. Janszky 76 (1990) 30
Vobian, J., All-fiber spectrometer for the determination of the emission wavelengths of semiconductor lasers 76 (1990) 332
Vogler, K., see L.H. Min 76 (1990) 357
Volkov, V.I., see M.S. Brodin 76 (1990) 21
Von Brentano, P., see J. Gassen 76 (1990) 131
Vourdas, A., Information theory approach to quantum non-demolition measurements 76 (1990) 164

Walker, S.J., see J. Jahns 76 (1990) 313
Wang, Z.-Q., W.-Z. Chen, R.-Y. Lue and R.-Z. Tai, Real-time multichannel intensity correlator 76 (1990) 305
Wartak, M.S., J. Chrostowski, W. Jiang and B.A. Syrett, Chromatic dispersion in ARROW waveguides 76 (1990) 217
Welford, W.T., see R. Winston 76 (1990) 191
Williams, J.A.R., see H. Avramopoulos 76 (1990) 229

Winston, R. and W.T. Welford, Measurement of radiance 76 (1990) 191
Wu, A.Y., see A. Mukherjee 76 (1990) 220

Xia, H.R., L.S. Ma, J.W. Xu, M. Yuan and I.S. Cheng, Direct measurements of magnetic hyperfine constants of $(3)\Pi_{\Omega_g}$ states in Na_2 76 (1990) 345
Xu, J.W., see H.R. Xia 76 (1990) 345
Xu, K., see S. Bian 76 (1990) 199
Xuan, N.P., see H.W. Li 76 (1990) 13

Yamamoto, Y., see L.K. Samanta 76 (1990) 250
Yamashita, M., S. Kaga and K. Torizuka, Chirp-compensation cavity-mirrors with minimal third-order dispersion for use in a femtosecond pulse laser 76 (1990) 363
Yanagawa, T., see L.K. Samanta 76 (1990) 250
Yuan, M., see H.R. Xia 76 (1990) 345

Zahid, M. and M.S. Zubairy, Coherence properties of second-harmonic beam generated by a partially coherent pump 76 (1990) 1
Zanon, R.A.D., Y.K. Huang, G.H. Cavalcanti, K.H. Tsui and C.A. Massone, Experimental analysis of a high nitrogen partial pressure carbon dioxide laser 76 (1990) 350
Zhang, J.J., see H.W. Li 76 (1990) 13
Zhang, L. and L. Liu, Morphological operations for symbolic substitution and Hough transform 76 (1990) 194
Zhu, X. and W. Sibbett, Intracavity characterisation of erbium-doped fiber using a coupled-cavity mode-locked KCl:Tl color center laser 76 (1990) 340
Zubairy, M.S., see M. Zahid 76 (1990) 1

SUBJECT INDEX TO VOLUME 76

Propagation and transmission in homogeneous media

Coherence properties of second-harmonic beam generated by a partially coherent pump, M. Zahid and M.S. Zubairy 76 (1990) 1
The super-gratings: how to improve the limiting resolution of grating spectrometers, V. Mazzacurati and G. Ruocco 76 (1990) 185
Measurement of radiance, R. Winston and W.T. Welford 76 (1990) 191
A phase stepping double-focus interferometer using a cyclic design and polarized light, J. Huang, T. Honda and N. Ohyama 76 (1990) 297

Propagation and transmission in inhomogeneous media

An alternative derivation of the 4×4 propagation matrix formalism, H.L. Ong 76 (1990) 302

Optical information, image formation and analysis, optical computing

Necessary conditions for nonnegativity constrained spectral factorization, D.W. Richardson and N.K. Bose 76 (1990) 8
Image processing: Fourier spectrum nonlinear filtering by photorefractive Fe:$LiNbO_3$ crystals, H.W. Li, J.L. Ferrier, J. Gazengel, N.P. Xuan, J.J. Zhang and G. Rivoire 76 (1990) 13
Nanosecond electrogyration selfdiffraction in $Bi_{12}TiO_{20}$ (BTO) crystal, M.S. Brodin, V.I. Volkov, N.V. Kukhtarev and A.V. Privalko 76 (1990) 21
Joint transform correlator using an amorphous silicon ferroelectric liquid crystal spatial light modulator, D.A. Jared, K.M. Johnson and G. Moddel 76 (1990) 97
A Dammann grating with diffraction orders of arbitrary intensity etched into Al_2O_3, M. Heißmeier, U. Krackhardt and N. Streibl 76 (1990) 103
Nonabsorptive binary optical programmable logic array, Y. Li and G. Eichmann 76 (1990) 107
Morphological operations for symbolic substitution and Hough transform, L. Zhang and L. Liu 76 (1990) 194
Near neighboring neurons interconnected neural network, S. Bian, K. Xu and J. Hong 76 (1990) 199
Arithmetical measurements of electrical intensities with electro-optical devices, G. Mayer 76 (1990) 203
Measurement of the displacement distribution by speckle photography using a BSO crystal, K. Nakagawa, T. Takatsuji and T. Minemoto 76 (1990) 206
Phase-stepping holographic interferometry in studying transparent density fields around 2-D objects of arbitrary shape, T.A.W.M. Lanen, C. Nebbeling and J.L. van Ingen 76 (1990) 268
Real-time multichannel intensity correlator, Z.-Q. Wang, W.-Z. Chen, R.-Y. Lue and R.-Z. Tai 76 (1990) 305
An optical conversion system: from binay to decimal and decimal to binary, S. Mukhopadhyay 76 (1990) 309
Imaging with planar optical systems, J. Jahns and S.J. Walker 76 (1990) 313
Integrated-optical split-and-shift module based on planar optics, J. Jahns and B.A. Brumback 76 (1990) 318

Optical implementation of the Banyan network, J. Jahns 76 (1990) 321
Image enhancement by nonlinear joint transform processing, B. Javidi, J. Ruiz and C. Ruiz 76 (1990) 325
All-fiber spectrometer for the determination of the emission wavelengths of semiconductor lasers, J. Vobian 76 (1990) 332
2-D generation of random numbers by multimode fiber speckle for silicon arrays of processing elements, Ph. Lalanne, H. Richard, J.C. Rodier, P. Chavel, J. Taboury, K. Madani, P. Garda and F. Devos 76 (1990) 387

Optical communications

Prepolymer-based waveguiding thin films for the holographic recording of dry-developing refractive-index gratings, W. Driemeier 76 (1990) 25
An injection-locked erbium fibre laser, J.D.C. Jones and P. Urquhart 76 (1990) 42
Soft-X-ray multilayer gratings with subhalfmicron period, H. Berrouane, J.-M. André, R. Barchewitz, C. Khan Malek and R. Rivoira 76 (1990) 111
Effective index models for MQW waveguides, R.A. Sammut and I.M. Skinner 76 (1990) 213
Chromatic dispersion in ARROW waveguides, M.S. Wartak, J. Chrostowski, W. Jiang and B.A. Syrett 76 (1990) 217
All-fiber spectrometer for the determination of the emission wavelengths of semiconductor lasers, J. Vobian 76 (1990) 332
Intracavity characterisation of erbium-doped fiber using a coupled-cavity mode-locked KCl:Tl color center laser, X. Zhu and W. Sibbett 76 (1990) 340
Polarization coupling in single-mode single-polarization optical fibers: power coupling, C.-X. Shi and Y.-J. Mao 76 (1990) 345

Atomic and molecular physics

Phonon squeezing in chirped pulse pump and probe experiments, J. Janszky, T. Kobayashi and A.V. Vinogradov 76 (1990) 30
Effect of a magnetic field on the resonant multistep selective photoionization of gadolinium isotopes, E. le Guyadec, J. Ravoire, R. Botter, F. Lambert and A. Petit 76 (1990) 34
Amplitude-squared squeezing in collective resonance fluorescence, T. Quang, L.H. Lan, A.S. Shumovsky and V. Buzek 76 (1990) 47
Enhanced coherent phonon generation by periodic excitation with Q-switched and mode-locked laser pulses, K. Ishikawa, Y. Takahashi, U. Tanaka, Y. Fukuda and T. Hashi 76 (1990) 81
Direct measurements of magnetic hyperfine constants of $(3)\Pi_{\Omega_g}$ states in Na_2, H.R. Xia, L.S. Ma, J.W. Xu, M. Yuan and I.S. Cheng 76 (1990) 345

Condensed matter

Quantum beats in the exciton emission of type II GaAs/AlAs quantum wells, W.A.J.A. van der Poel, A.L.G.J. Severens and C.T. Foxon 76 (1990) 116
Electric field induced second harmonic generation in PLZT, A. Mukherjee, S.R.J. Brueck and A.Y. Wu 76 (1990) 220
Theory of two-step pulsed spectral hole-burning in four-level systems, I. Rebane 76 (1990) 225

Lasers

An injection-locked erbium fibre laser, J.D.C. Jones and P. Urquhart 76 (1990) 42
High tunability, high beam quality CO_2 laser with SFUR cavity and beam expander, F. D'Amato, M. Giorgi and S. Marchetti 76 (1990) 121
FM operation of Nd:YAG lasers with standing wave and ring cavity configurations, C.S. Adams, G.T. Maker and A.I. Ferguson 76 (1990) 127
A high power dye laser pumped by a crowbar mode flashlamp, J. Gassen, D. Müller, P. von Brentano and A.P. Georgiadis 76 (1990) 131
Kilohertz picosecond distributed-feedback dye laser system, G.M. Gale, B. Pedersen and P. Schanne 76 (1990) 138
Temporal and spectral behaviour of passively mode locked dye lasers, H. Avramopoulos, P.M.W. French, G.H.C. New, M.M. Opalinska, J.R. Taylor and J.A.R. Williams 76 (1990) 229
Amplification of a femtosecond laser at eight kilohertz with a continuously pumped YAG laser, A. Chébira and J. Chesnoy 76 (1990) 235
Efficient amplification and tunable frequency conversion of femtosecond pulses, R. Gagel, G. Angel and A. Laubereau 76 (1990) 239
Experimental analysis of a high nitrogen partial pressure carbon dioxide laser, R.A.D. Zanon, Y.K. Huang, G.H. Cavalcanti, K.H. Tsui and C.A. Massone 76 (1990) 350
A Landau-Ginzburg equation for a high-gain free electron laser, R. Bonifacio, C. Maroli and A. Dragan 76 (1990) 353
Misalignment sensitivity of Nd:YAG unstable resonator with self-filtering aperture, L.H. Min and K. Vogler 76 (1990) 357
Chirp-compensation cavity-mirrors with minimal third-order dispersion for use in a femtosecond pulse laser, M. Yamashita, S. Kaga and K. Torizuka 76 (1990) 363
Efficient frequency doubling of a diode-laser-pumped mode-locked Nd:YAG laser using an external resonant cavity, G.T. Maker and A.I. Ferguson 76 (1990) 369
Deterministic solution to the inhomogeneously broadened bidirectional ring laser equations with backscattering, asymmetry, and cavity rotation, T.H. Chyba 76 (1990) 395

Nonlinear optics

Coherence properties of second-harmonic beam generated by a partially coherent pump, M. Zahid and M.S. Zubairy 76 (1990) 1
Amplitude-squared squeezing in collective resonance fluorescence, T. Quang, L.H. Lan, A.S. Shumovsky and V. Buzek 76 (1990) 47
Higher-order coherence functions of phase states, R. Nath and P. Kumar 76 (1990) 51
Femtosecond solitary waves in the presence of resonant absorption, V. Petrov and W. Rudolph 76 (1990) 53
Spectral characteristics of steady-state amplifiers, M.D. Rotter and R.A. Haas 76 (1990) 56
Effect of delay in a bistable optical system with distributed nonlinear elements, J.-L. Chern, J.K. McIver and J.-T. Shy 76 (1990) 63
Efficiency enhancement in free-electron lasers under conditions of optical guiding, N.S. Ginzburg, M.A. Gorshkova and A.S. Sergeev 76 (1990) 69
Photocount quantum fluctuations in beam-splitting difference detection, F. De Martini and K.H. Strobl 76 (1990) 75
Enhanced coherent phonon generation by periodic excitation with Q-switched and mode-locked laser pulses, K. Ishikawa, Y. Takahashi, U. Tanaka, Y. Fukuda and T. Hashi 76 (1990) 81

Theory of bistability and self pulsing in a ring resonator with saturable photorefractive gain and loss, D.M. Lininger, D.D. Crouch, P.J. Martin and D.Z. Anderson 76 (1990) 89
Squeezed states with a thermal photon distribution, M.E. Marhic and P. Kumar 76 (1990) 143
Third-order nonlinear optical properties of cyanine dyes and polymer films containing these dyes, S. Matsumoto, K. Kubodera, T. Kurihara and T. Kaino 76 (1990) 147
Stability of multiple solutions in photorefractive four-wave mixing with external electric field, K.D. Shaw and M. Cronin-Golomb 76 (1990) 151
Population correlations in transient stimulated Raman scattering, S.Ya. Kilin, M. Trippenbach and J. Cooper 76 (1990) 157
Information theory approach to quantum non-demolition measurements, A. Vourdas 76 (1990) 164
Monotonic versus oscillatory behaviour during holographic writing in photorefractive photovoltaic materials, F. Jariego and F. Agulló-López 76 (1990) 169
Nonlinear dispersion effects in the low-noise properties of squeezed light in transmission chains formed from nonlinear alternating attenuators and amplifiers, P. García-Fernández and F.J. Bermejo 76 (1990) 173
Nonlinear control: bistability with modulated input, C. Boden, F. Mitschke and P. Mandel 76 (1990) 178
High speed self-pulsation in a two-element optical bistable device, K. Otsuka, J.-L. Chern and J.K. McIver 76 (1990) 245
Technique for enhanced second harmonic output power, L.K. Samanta, T. Yanagawa and Y. Yamamoto 76 (1990) 250
Correlated photons in parametric frequency conversion with initial two-mode squeezed states, M.J. Gagen and G.J. Milburn 76 (1990) 253
Degenerate four-wave mixing in solutions of pure and iodine-doped polyphenylacetylene, R. Vijaya, Y.V.G.S. Murti, G. Sundarrajan and T.A. Prasada Rao 76 (1990) 256
Remarks on the temperature dependence of the Optical Friedericksz Transition, F. Bloisi, L. Vicari and F. Simoni 76 (1990) 261
Degenerate four-wave mixing and squeezing in pumped three-level atomic systems, M.S.K. Razmi and J.H. Eberly 76 (1990) 265
Universal normal-form description of squeezing and instabilities in two-photon processes, L.A. Lugiato, P. Galatola and L.M. Narducci 76 (1990) 276
Measurements of rotational diffusion with time-resolved stimulated anisotropic Raman scattering, E.A.J. Spaans, M.P. van Exter and A. Lagendijk 76 (1990) 376
Angle dependence of the PCR in the simultaneous operation of reflection and transmission gratings in photorefractives, T.K. Das and K. Singh 76 (1990) 381
Self-pumped Brillouin enhanced four-wave mixing in a medium with a small phase mismatch, K.D. Ridley and A.M. Scott 76 (1990) 406